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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,483	01/15/2004	Youbin Mao		4155

7590 04/20/2006  
Youbin Mao  
430 N. Holliston Ave. #210  
Pasadena, CA 91106

EXAMINER  
HOLZEN, STEPHEN A

ART UNIT PAPER NUMBER

3644

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**KNOX**

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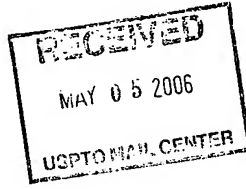
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1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand the preferences and behaviors of potential customers. Once a need is identified, the next step is to develop a concept that addresses this need. This concept should be unique and offer a clear value proposition to the target market.

<b>Office Action Summary</b>	<b>Application No.</b> 10/757,483	<b>Applicant(s)</b> MAO, YOUNG	
	<b>Examiner</b> Stephen A. Holzen	<b>Art Unit</b> 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 2/7/2006 have been fully considered but they are not persuasive.
2. Applicant has argued that folding propellers are known in the art and would not require undue experimentation to make or use with a tail sitting aircraft. The applicant evidences the use of folding propellers with hobby model <sup>planes</sup> ~~planes~~. The applicant has not invented a hobby model plane, however, and therefore this argument is moot. Tail sitting aircraft are not structurally equivalent to hobby model planes. TL

Applicant has further argued that all four propellers can be folded back when not spinning. The examiner does not understand how the present invention would land safely without the use of at least one of the propellers. The aircraft is only capable of landing on it's tail, and the propellers are required for use at this time (to lower the aircraft). The applicant has not provided any evidence that one of ordinary skill in the art would be able to land the aircraft without the use of the propellers (since they are folded back).

The examiner does not know what the hobby model plans use for propulsion, (one propeller, two propellers or four propellers.) Folding a single propeller would be less complicated than folding four propellers. The forces exerted on each propeller would tend to yaw or pitch the aircraft. The examiner is not convinced that undue experimentation is not required to fold all four propellers such that the aircraft can

continue to glide in a safe manner. Folding all four propellers during forward flight would entail substantial drag forces and would serve to destabilize the aircraft.

Once the examiner has advanced a reasonable basis for questioning the adequacy of the disclosure, it becomes incumbent on the applicant to rebut that challenge and factually demonstrate that his or her application disclosure is in fact sufficient. See *In re Doyle*, 482 F.2d 1385, 1392, 179 USPQ 227, 232 (CCPA 1973); *In re Scarbrough*, 500 F.2d 560, 566, 182 USPQ 298, 302 (CCPA 1974); *In re Ghiron*, *supra*. See also MPEP § 2106, paragraph V.B.2 and § 2164 - § 2164.08(c).

Arguments may be effective in establishing that an examiner has not properly met his or her burden or has otherwise erred in his or her position. In these situations, an examiner may have failed to set forth any basis for questioning the adequacy of the disclosure or may not have considered the whole specification, including the drawings and the written description. However, it must be emphasized that arguments alone cannot take the place of evidence in the record once an examiner has advanced a reasonable basis for questioning the disclosure. See *In re Budnick*, 537 F.2d at 538, 190 USPQ at 424; *In re Schulze*, 346 F.2d 600, 145 USPQ 716 (CCPA 1965); *In re Cole*, 326 F.2d 769, 140 USPQ 230 (CCPA 1964).

3. Re – Claims 1 and 3: Applicant's arguments do not have similar scope to applicant's claims; and therefore these arguments are moot. The applicant has not differentiated the present claims from the prior art. Applicant's arguments (a) and (b) are moot since these arguments compare Sprecher with a disclosed invention and not a

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claimed invention. Applicant should highlight the differences between the prior art and the claimed invention. Where there is no difference between the claimed invention and the prior art, an anticipation rejection is proper. Applicant has not claimed

- a. "Counter-rotating propellers"
- b. A tail sitting wing that is not axially symmetric
- c. The location of the center of gravity
- d. The lack of additional control surfaces (flaps or other types of deflectors)

4. Applicant has provided arguments that are related to prior art documents not presently used by the examiner to reject the claims. The examiner appreciates applicant's analysis, however the applicant should note that these arguments are moot since the examiner has not rejected the claims over these references. (see arguments (c) – (k)).

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 2 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the

invention. The examiner does not believe that one of ordinary skill in the art would be able to make and/or use propeller that can be folded back without undue experimentation. The examiner cannot find a discussion as to the mechanisms that would be used to perform the actual unfolding steps. Furthermore the examiner believes that the act of stopping the propellers and folding them into a more aerodynamic condition would result in unstable aerodynamic effects.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by 3,120,359). Sprecher discloses an airship having four engines positioned in different planes forward of the ship and spaced equidistant from the fuselage and from each other, the engines are capable of equal thrust and are forward of the ship's center of gravity. These engines may be channel wings in various adaptations such as turbo jets, ramjets, atomic power, or controllable rockets. Control mechanisms are provided for effecting measured thrust of any or all the engines above or below the equal thrust plane. The tail assembly #17 includes a plurality of fins (24, 25, 26, 27) which are spaced radially between engine supports 19, 20, 21, 22 and are capped with retractable fairings 8, 29, 30, 31 and which serve as landing pads on which the ship rests upon the

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ground. Each of the landing pads is pivotally connected to the outer terminal of the arms 28', 29', 30' and 31'.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

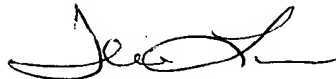
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 571-272-6903. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sah



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